

Having thus described the preferred embodiment, the invention is now claimed to be:

1. A method for handling items potentially contaminated with a pathogenic agent comprising:

sorting the potentially contaminated items in an enclosure;

5 treating at least a portion of the sorted items with a first decontaminant capable of destroying the pathogenic agent; and

treating the enclosure with a second decontaminant.

2. The method of claim 1, wherein the first decontaminant includes an oxidizing gas.

3. The method of claim 2, wherein the oxidizing gas includes ethylene oxide.

4. The method of claim 1, wherein the second decontaminant includes an antimicrobial vapor.

5. The method of claim 4, wherein the antimicrobial vapor includes hydrogen peroxide.

6. The method of claim 1, wherein the step of treating at least a portion of the sorted items with the first decontaminant is carried out in a chamber which is selectively connected with the enclosure and is 5 isolatable from the enclosure.

7. The method of claim 6, further including, prior to the step of treating at least a portion of the items with a first decontaminant:

5 transporting the at least a portion of the items from the enclosure to the chamber connected with the enclosure; and

closing off the chamber from the enclosure.

8. The method of claim 1, further including, prior to the step of sorting:

introducing the items to the enclosure in a sealed container.

9. The system of claim 8, wherein the step of introducing the items to the enclosure in the sealed container includes:

5 connecting the sealed container containing the items with an interlock which selectively provides access to the enclosure while forming a seal between the container and the interlock;

with the container connected to the interlock, opening the container to the enclosure; and

10 introducing the items to the enclosure from the container.

10. The method of claim 1, wherein the enclosure is airtight or is operated under a negative pressure.

11. The method of claim 1, wherein the step of sorting includes:

using manipulators to sort the items; and

5 placing the items to be decontaminated with the first decontaminant in a basket.

12. The method of claim 1, further including:

loading the at least a portion of the items into a basket;

5 transporting the basket into the chamber of a sterilizer connected with the enclosure;

evacuating the sterilizer chamber; and

introducing gaseous sterilant to the chamber, the items being kept in the sterilizer for a sufficient time to decontaminate the items.

13. The method of claim 12, further including, after the introducing step:

aerating the chamber to remove residual sterilant.

14. The method of claim 1, further including, within the enclosure, examining at least a portion of the items with an x-ray machine.

15. The method of claim 1, wherein the items include mailed items.

16. The method of claim 15, further including:

scanning a document in the mail with a scanning device within the enclosure to generate a scanned image; and

5 transmitting the scanned image to a location outside the enclosure.

17. The method of claim 1, further including:

employing at least one detector capable of detecting at least one pathogenic agent when present at a detectable level within the enclosure.

18. The method of claim 17, further including:

tailoring at least one of the step of treating the enclosure with a second decontaminant and the step of treating at least a portion of the sorted items with a 5 first decontaminant according to at least one of a type of pathogenic agent detected and a level of the pathogenic agent detected to improve the effectiveness of the at least one step.

19. A system for handling items which may be contaminated with a pathogenic agent comprising:

an enclosure for receiving and sorting incoming items;

5 a chamber which receives at least a portion of the sorted items from the enclosure and decontaminates the portion of sorted items with a first decontaminant;

a source of the first decontaminant fluidly connected with the chamber;

10 a source of a second decontaminant, fluidly connected with the enclosure for supplying a second decontaminant to the enclosure for decontaminating the enclosure.

20. The system of claim 19, further including:

a passageway which aseptically interconnects the enclosure and the chamber such that items from the enclosure enter the chamber without exposure to the 5 exterior environment.

21. The system of claim 19, further including: means for selectively sealing the chamber from the enclosure.

22. The system of claim 19, wherein the second decontaminant includes vapor hydrogen peroxide and the source of hydrogen peroxide includes a vapor generator.

23. The system of claim 19, further including a movable cart which supports the enclosure.

24. The system of claim 19, wherein the enclosure includes a transfer port sized to receive a container containing items to be sorted.

25. The system of claim 24, wherein the transfer port is configured for interconnection with the

5 container containing items to be sorted such that the container is openable into the enclosure for introducing the items to the enclosure.

26. The system of claim 19, further including an x-ray device, located within the enclosure for examining mail with x-rays.

27. The system of claim 19, further including a scanning device within the enclosure for forming a scanned image of a document.

28. The system of claim 19, further including a detector for detecting at least one pathogen in the enclosure.

29. A system for handling potentially contaminated items comprising:

5 an isolator which defines an enclosure capable of being isolated from an exterior environment and an access opening for receiving the items into the enclosure;

means for sorting the items in the enclosure;
a chamber capable of being isolated from an exterior environment;

10 an enclosed passageway which selectively connects the enclosure with the chamber, such that at least a portion of the items can be transferred to the chamber from the enclosure without exposure to the exterior environment;

15 a source of a first decontaminant fluidly connected with the chamber for decontaminating the transferred portion of the items; and

20 a source of a second decontaminant fluidly connected with the enclosure for decontaminating the enclosure and items which have not been transferred to the chamber.

30. The system of claim 29, wherein the first decontaminant is different from the second decontaminant.